OPERATION AND PROGRAMMING MANUAL
for the Programmable Computer Control

Models: All DW, DX & NX
Series: d4, P2, P3, P4, P6

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Contents

Overview

The EDRO DynaWash$^{®}$ programmable computer control provides flexible automatic and manual operation of your washer-extractor. It has been designed from the ground up to operate your EDRO machine with the utmost convenience and safety. Using its fifty wash programs, you can program wash cycles tailored for your most difficult wash items.

Operation

The programmable computer control offers two kinds of automatic operation: a "secure" mode (Run 1), which does not allow operators to change wash steps or select different wash programs once a wash program has been started, and a "supervisor" mode (Run 2), which lets the operator change steps or programs and manually operate the machine. These modes of operation are selectable using the three-position keyswitch. The third keyswitch position, Program, allows you to create and edit the control's wash programs. The key may be removed from the keyswitch only in the Run 1 and Run 2 positions.

When in the Secure or Supervisor modes, the machine may be operated automatically by using the program up and down keys to select the appropriate wash program and then pressing the start key to begin running the selected wash program. When selecting wash programs, the time display will show the total program time. Only the wash programs that have been set up on this control will appear – if wash programs 1, 2 and 4 are in use, program 3 will be skipped when you press the program up key when program 2 is selected.

Secure Mode (Run 1)

When in secure mode, the control closely limits what the operator can do to minimize tampering with the operation of the machine.

Active Keys	
Start	Starts a wash program, or resumes a paused wash program.
Stop	Pauses a running wash program. Cancels the signal at the end of a wash program or after an error occurs. Also releases the door lock at the end of a program.
Program Up	Selects the next wash program when washer is idle (at the end of a wash program).
Program Down	Selects the previous wash program when the washer is idle.
Step Up	Selects the next step in the current wash program when the washer is idle.
Step Down	Selects the previous step in the current wash program when the washer is idle.

Displays	
Program	Displays the current wash program number.
Step	Displays the current step in the wash program.
Time	Displays the wash program time remaining while a program is running. During the last minute of each wash step while the program is running, it displays the number of seconds remaining in the current step. To display the program elapsed time, press the program up and down buttons simultaneously. To display the step programmed time, press the step up and down buttons simultaneously. To display the step remaining time, press the time up and down buttons simultaneously.
Temp	Displays the machine's actual water temperature. To display the water temperature programmed on this step, press the temperature up and down buttons simultaneously.
Fill Level	The solid level light indicates the water level programmed on the current wash step. If the actual water level is above or below the programmed water level, the light corresponding to that level will blink.
Function Lights	The lights for washer functions that are programmed on this step (hot water, cold water, etc.) will be on solid if that function is programmed but not in use or will flash if that function is in use.

If the machine is idle, the operator may select a wash program (using the Program Up and Down keys) and may view the steps of the wash program (using the Step Up and Down keys). However, wash programs will always start running at step 1, and may only be paused – not stopped.

Supervisor Mode (Run 2)

When in the supervisor mode, the control allows significantly greater access to machine functions.

Active Keys	
Start	Starts a wash program, or resumes a paused wash program
Stop	Pauses a running wash program. Cancels the signal at the end of a wash program or after an error occurs. Also releases the door lock at the end of a program.
Program Up	Selects the next wash program when washer is idle or stopped.
Program Down	Selects the previous wash program when the washer is idle or stopped.
Step Up	Selects the next step in the current wash program when the washer is idle or stopped.
Step Down	Selects the previous step in the current wash program when the washer is idle or stopped.
Temp Up	Increases the programmed water temperature for the current step by one degree.
Temp Down	Decreases the programmed water temperature for the current step by one degree.
Time Up	Increases the programmed time for the current step by one minute.
Time Down	Decreases the programmed time for the current step by one minute.
Heat	Operates the manual heat override – the heat output will remain on as long as the operator holds the heat key.
Hot	Operates the manual hot water override – the hot water output will remain on as long as the operator holds the hot key.
Cold	Operates the manual cold water override – the cold water output will stay on as long as the operator holds the cold key.
Drain	Operates the manual drain override – the drain output will remain on as long as the operator holds down the drain key.

Displays	
Program	Displays the current wash program number.
Step	Displays the current step in the wash program.
Time	Displays the wash program time remaining while a program is running. During the last minute of each wash step while the program is running, it displays the number of seconds remaining in the current step. To display the program elapsed time, press the program up and down buttons simultaneously. To display the step programmed time, press the step up and down buttons simultaneously. To display the step remaining time, press the time up and down buttons simultaneously.
Temp	Displays the machine's actual water temperature. To display the water temperature programmed on this step, press the temperature up and down buttons simultaneously.
Fill Level	The solid level light indicates the water level programmed on the current wash step. If the actual water level is above or below the programmed water level, the light corresponding to that level will blink.
Function Lights	The lights for washer functions that are programmed on this step (hot water, cold water, etc.) will be on solid if that function is programmed but not in use or will flash if that function is in use.

The supervisor mode offers the operator much greater control over the operation of the machine than secure mode. The operator may stop the washer, select another step in the current wash program or another wash program, and restart the washer. It allows the operator to manually override the hot water, cold water, drain and heat functions while the machine is running a wash program and to increase or decrease the programmed temperature or time for a given step.

Manual Mode

The manual mode is available only when the keyswitch is in the Program or Run 2 positions. To enter the manual mode, use the program up or down keys until "- -" appears in the program number display. The manual mode allows manual operation of most washer-extractor features.

Active Keys	
Stop	Halts any manual operation currently in progress; closes the drain and all water valves.
Program Up	Exits the manual mode and selects the next wash program.
Program Down	Exits the manual mode and selects the previous wash program.
Heat	Press to activate the heat or steam. Press again to shut off.
Hot	Press to open the hot water valve. Press again to close.
Cold	Press to open the cold water valve. Press again to close.
Drain	Press to open the drain. Press again to close.
Reuse	Press to open the water reuse system inlet or drain (depending on whether the drain or cold water valve is already open). Press again to close.
Polycool	Press to open the polycool valve. Press again to close.
Wash Select	Press once to activate the standard wash cadence (26 seconds forward, 4 seconds pause, 26 seconds reverse). Press a second time to activate the forward wash motor only. Press a third time to activate the reverse wash motor only. Press again to stop the wash motors.
Extract Select	Press the extract select button to select the desired extract speed. (The control will follow the proper sequence for the selected extract). Not all extract speeds will be available on all models. To stop the extract, press the extract select key to de-select an extract, or press the stop key.

Displays	
Program	Displays "- -" when in the manual mode.
Step	Displays "- -" when in the manual mode.
Time	Displays the amount of time that the washer has been running a particular operation, i.e., wash or extract.
Temp	Displays the machine's actual water temperature.
Fill Level	The light corresponding to the current machine water level will blink.
Function Lights	The lights for washer functions that are in use will flash.

Errors

Error codes may appear on the control when running in either the secure or supervisor mode or in the manual mode.

When an error occurs:
- The control will sound the signal
- The step display will show "Er"
- The time display will show an error code (from the list below)
- The control will stop all machine operation

To cancel the signal and clear the error:
- Press the stop key.
- Once the signal has been cancelled, press the stop key clear the error message, or press the start key to restart the washer.

Error Codes

#1   Temperature timeout – the control was unable to bring the water temperature up to the programmed temperature in the allotted time (the temperature timeout set in the configuration mode).

#2   Level timeout – the control was unable to bring the water level up to the programmed level in the allotted time (the fill timeout set in the configuration mode).

#5   Wash motor overload

#6   Extract motor overload

#7   Extract failed three times

#8   Door open

#9   Water temperature limit exceeded – the water temperature exceeded $210^{\circ}F$.

#10   High water level exceeded – in a non-extract step, the water level in the machine exceeded the overflow level set in the configuration mode.

#14   Variable frequency drive fault / overload

#16   Vibration switch tripped

#17   Program memory error – an error was detected in the wash program checksum (usually caused by powering the machine down while editing a wash program).

#18   Configuration memory error – an error was detected in the configuration memory checksum (usually caused by powering the machine down while editing configuration).

#19   Stuck/clogged drain error – in a drain step, the water level in the machine was not below the safety level by the end of the step. In an extract step, the water level was below the safety level by the end of distribution.

Program Mode

The program mode is available only when the washer is idle and the keyswitch is in the program position. The key may not be removed from the keyswitch when in the program position.

The program mode is used to create and edit wash programs. The control has 50 user-programmable wash programs plus a test program (available only in supervisor mode). Each wash program is made up of 30 steps. Each step controls a single stage of the washing process – adding water or chemicals, draining water, extracting.

Active Keys	
Program Up	Selects the next wash program. Saves the current wash program if it has been changed.
Program Down	Selects the previous wash program. Saves the current wash program if it has been changed.
Step Up	Saves changes to the current step and selects the next step in the wash program.
Step Down	Saves changes to the current step and selects the previous step in the wash program.
Temp Up	Increases the programmed water temperature for the current step by one degree.
Temp Down	Decreases the programmed water temperature for the current step by one degree.
Time Up	Increases the programmed time for the current step by one minute.
Time Down	Decreases the programmed time for the current step by one minute.
Heat	Programs/clears heat on the current step.
Hot	Programs/clears hot water on the current step.
Cold	Programs/clears cold water on the current step.
Drain	Programs/clears the drain on the current step.
Reuse	Tells the control to use the water reuse system inlet/drain instead of the waste drain or fresh water valves.
Polycool	Programs/clears polycool on the current step.
Wash Select	Press once to program the standard wash cadence (26 seconds forward, 4 seconds pause, 26 seconds reverse). Press a second time to program the forward wash motor only. Press a third time to program the reverse wash motor only. Press again to de-select the wash motors.
Extract Select	Press the extract select button to select the desired extract speed for the current step. Not all extract speeds will be available on all models of machine.
Level Select	Press the level select button to select the desired water fill level for the current step.

Displays	
Program	Displays the current wash program number.
Step	Displays the current step in the wash program.
Time	Displays the time programmed for the current step.
Temp	Displays the water temperature programmed on this step.
Fill Level	The solid level light indicates the water level programmed on the current wash step.
Function Lights	The lights for washer functions that are programmed on this step (hot water, cold water, etc.) will be on solid if that function is programmed.

Creating a Wash Program

To begin editing a wash program

1. Stop the washer and put the keyswitch in the Program position.
2. Select the wash program you wish to edit using the program up and down buttons. *Note: The test program (51) cannot be edited.*
3. Press the program up and down keys simultaneously. The control will beep and light the two decimal points on the program display. This indicates that you are in program edit mode.

Programming a wash/chemical step

On wash steps, the control allows you to program water, heat, temperature, time and chemicals. When running the program, it will use the selected water to achieve the programmed level, use the heat valve to achieve the programmed temperature, inject the chemicals, then run the time. It is not necessary to program separate fill and chemical steps, because the control does not start counting down the step time until it has achieved level and temperature and injected all chemicals.

1. In the program edit mode (the program display decimal points lit), select the step you want to use as a wash step using the step up and down keys.
2. **To program a fill** press the hot or cold key to select the type of water you wish to fill with. If you select both, the control will perform a "split" fill, with both valves open. Use the fill level select key to select the water level you wish to use. **To fill from the water reuse system** press either the hot or cold key, select a level, and press the reuse key. The control will attempt for ten minutes to fill with water from the reuse system; it will use whichever water was selected (hot or cold) if the level could not be achieved using the reuse tank. On fill steps, the control will automatically program the default wash cadence (26 seconds forward, 4 seconds pause, 26 seconds reverse).
3. **To program chemicals** press the chemical select key. The light for the first internal chemical will begin flashing to indicate that you are programming the time for the first internal chemical, and the injection time will appear on the time display. If this chemical has been programmed, the inject light will be lit. If you wish to use this chemical, press the inject key to program the default chemical injection time. If this chemical was previously programmed and you wish to remove it from this step, press the inject key to remove it. To move on to the next chemical, press the chemical select key again.
4. **To program temperature** press the heat key, then use the temperature up and down keys to select the desired temperature.
5. **To program the wash cadence** press the wash select key. The control will automatically program a reversing wash and the wash forward, pause and reverse lights will be lit. To program a one-way forward step, press the wash select key again. The wash forward light will be the only wash light lit to indicate that this is a one-way forward step. Press the wash select key again to select a one-way reverse step. Press the wash select key again for a still step.
6. **To change the wash cadence times** press and hold the wash select key until the control beeps. The program display will show "CA", the step display will show "Fo", and the time display will show the wash motor forward time. Use the time up and down keys to select the desired time. When finished, press the wash select key again. The step display will now show "PA", and the pause time will appear on the time display. When finished editing the pause time, press the wash select key again. The step display will now show "RE", and the time display will show the reverse time. When finished changing the reverse time, press the wash select key again.
7. **To program a step time** use the time up/down buttons to select the desired step time. The control allows step times of 0-59 seconds or 1-99 minutes. To program a step time in seconds, use the time down key to select a step time of 0. Then press the time down key again – the time display will now show "59" and the "sec" light will be lit to indicate that the step time is in seconds. Use the time up and down keys to select the desired time. If you wish to program a step time in minutes, press the time up key until the "min" light is lit, then use the time up and down keys to select the desired step time.

Programming a drain step

On drain steps, the control allows drain or reuse drain, a wash cadence, and a time to be programmed. If a one-way forward drain is programmed, the control will use the drain speed on P6 machines or the distribution motor on P3 and P4 machines.

1. In the program edit mode (the program display decimal points lit), select the step you want to use as a drain step using the step up and down keys.
2. **To program drain** press the drain key. The control will automatically program a one-way drain step (using motor forward) and insert the default drain time in for the programmed step time.
3. **To program reuse drain**, press the drain key, then the reuse key. The control will automatically open the reuse drain instead of the waste drain when running this step.
4. **To program a step time** if the default drain time is not appropriate, use the time up/down buttons to select the desired step time. The control allows step times of 0-59 seconds or 1-99 minutes. To program a step time in seconds, use the time down key to select a step time of 0. Then press the time down key again – the time display will now show "59" and the "sec" light will be lit to indicate that the step time is in seconds. Use the time up and down keys to select the desired time. If you wish to program a step time in minutes, press the time up key until the "min" light is lit, then use the time up and down keys to select the desired step time.

Programming an extract step

On extract steps, the control allows a selection of extract speeds (depending on the model of machine), a step time, and a choice of waste or reuse drains.

1. In the program edit mode (the program display decimal points lit), select the step you want to use as an extract step using the step up and down keys.
2. **To program extract** press the extract select key until the light corresponding to the desired extract speed is lit.
3. **To program a step time** if the default drain time is not appropriate, use the time up/down buttons to select the desired step time. The control allows step times of 0-59 seconds or 1-99 minutes. To program a step time in seconds, use the time down key to select a step time of 0. Then press the time down key again – the time display will now show "59" and the "sec" light will be lit to indicate that the step time is in seconds. Use the time up and down keys to select the desired time. If you wish to program a step time in minutes, press the time up key until the "min" light is lit, then use the time up and down keys to select the desired step time.

Inserting a step

1. Select the step where you want to insert a new operation using the step up and down buttons.
2. Press the step up and down keys simultaneously. The current step and all steps above it will be moved one step higher and a blank step will be inserted in the current location.

Deleting a step

1. Select the step you want to delete using the step up and down buttons.
2. Press the time up and down keys simultaneously. The current step will be removed from the wash program, and all higher numbered steps will be moved down one position.

Deleting a program

1. Select the program you wish to delete and enter the program edit mode (the program display decimal points lit) by pressing the program up and down buttons simultaneously.
2. Press the program up and down buttons again. The control's display will read "counters". Use the program up key to select "delete pro".
3. To delete the current program, press the start key.
4. The control will display "r u sure" to confirm that you wish to delete the current wash program. Press start again to delete the program, or press any other key to cancel the action.

Copying a program

Note: when copying a program, anything programmed in the destination program will be lost.

1. Select the program you wish to copy and enter the program edit mode (the program display decimal points lit) by pressing the program up and down buttons simultaneously.
2. Press the program up and down buttons again. The control's display will read "counters".
3. Press the program up button until the display reads "copy pro".
4. To copy the program, press the start key.
5. The display will now read "cp ## to $$", where ## is the current wash program number and $$ is the destination wash program number. Use the temperature up and down buttons to select the desired destination program.
6. Press the start key to copy the program.

Linking a program

The computer control allows you to "link" wash programs, so that when one finishes, it automatically starts another one, allowing you to create wash program with more than 30 steps.

1. Select the first program you wish to link and enter the program edit mode (the program display decimal points lit) by pressing the program up and down buttons simultaneously.
2. Press the program up and down buttons again. The control's display will read "counters".
3. Press the program up button until the display reads "link pro".
4. Press the start key.
5. The display will now read "Ln ## to $$", where ## is the current wash program number and $$ is the destination wash program number. Use the temperature up and down buttons to select the desired destination program.
6. Press the start key again to link the programs. When you view the last step in the wash program, the time display will show "FL" and the temperature display will show the formula number of the formula linked to this one.

Unlinking a program

To unlink a program, select the last step in the linked program and follow the instructions for deleting a step.

Discarding program changes

If you decide that you want to discard changes you made to a wash program while in program edit mode:

1. Press the program up and down keys.
2. Use the program up key to select "cancel edt".
3. Press the start key. Any changes made to the program will be discarded, and the control will leave program edit mode.

Configuration Mode

The computer control's configuration mode is used to set operating parameters for your machine.

Entering configuration mode

Put the keyswitch in the Program position. Push in the emergency stop button to shut off power to the washer. Turn the emergency stop button to restore power to the machine. While the "Edro" banner is displayed on the screen, press and release the start key. The control will enter configuration mode; the step display will show "PA" and the time display will display the motor configuration for your machine. The configuration mode may also be entered by going into the program mode, pressing the program up and down keys simultaneously to enter program edit mode, pressing the program up and down keys again to display the advanced editing options, then using the program up and down keys to select "configure". Press the start key to enter the configuration mode.

Configuration settings

The following are the configuration settings for the control, in order.

Setting: PA
Description: Machine motor configuration
Settings: P2, P3, P4, P6, d4
To Edit: press the time up and down keys to select your machine's motor configuration. Press the stop key to advance to next option.

Setting: Lo
Description: Level Offset
Settings: pre-set from factory for the unit
To Edit: press the temperature up and down keys to select, press the stop key to advance to next option.

Setting: SL
Description: Safety Level
Settings: pre-set from factory for 2 inches
To Edit: The temperature display shows the current setting. The time and step displays show the water level count for the water currently in the machine. The cold and drain keys can be used to add or remove water from the machine until you have the amount of water you wish to use for the safety level actually in the machine. Press the temperature up and down keys simultaneously to make the water level in the machine the new setting, or press them individually to select a water level manually. Press the stop key to advance to the next option.

Setting: oL
Description: Overflow Level
Settings: will need to be set for the particular machine; valid range 0-255
To Edit: The temperature display shows the current setting. The time and step number displays show the water level count for the water currently in the machine. The cold and drain buttons can be used to add or remove water from the machine until you have the amount of water you wish to use for the safety level actually in the machine. Press the temperature up and down buttons simultaneously to make the water level in the machine the new setting, or press them individually to select a water level manually. Press the stop key to advance to the next option.

Setting: L1
Description: lowest water level through L5 - highest water level
Settings: needs to be set differently for different size machines; machines of same series can use the same settings; valid range 0-255
To Edit: The temperature display shows the current setting. The time and step number displays show the water level count for the water currently in the machine. The cold and drain buttons can be used to add or remove water from the machine until you have the amount of water you wish to use for the safety level actually in the machine. Press the temperature up and down buttons simultaneously to make the water level in the machine the new setting, or press them individually to select a water level manually. Press the stop key to advance to the next option.

Setting: br d1
Description: display brightness for numeric displays
Settings: will be pre-set from CCS for medium brightness; customer can increase if desired; valid range 1-15
To Edit: Use the time up and down buttons to select the desired value. Press stop to advance to the next option.

Setting: br d2
Description: display brightness for function LEDs
Settings: will be pre-set from CCS for medium brightness, customer can increase if desired; valid range 1-15
To Edit: Use the time up and down buttons to select the desired value. Press stop to advance to the next option.

Setting: SPd
Description: motor speed test routine. Available only on P6 models.
Use: To start basket rotation, press the wash select key. The first press will start forward rotation, the second press will change to reverse rotation, and the third press will stop rotation. To adjust the speed of the machine, use the temperature up and down keys to select the desired RPM. The maximum and minimum values available will be SP rH and SP rL, respectively.

Setting: SP rL
Description: rotational speed of machine when speed output at 0V; P6 washers only
Settings: may be set to any value between 0 and 999; represents the slowest controllable speed of washer; entry may be in RPM or Hz as long as same units are used for all other RPM settings
To Edit: Use the temperature up and down buttons to select the desired value. Press stop to advance to the next option.

Setting: SP rH
Description: rotational speed of machine when speed output at 10V; P6 washers only
Settings: may be set to any value between 0 and 999; represents the highest controllable speed of washer; entry may be in RPM or Hz as long as same units are used for all other RPM settings
To Edit: Use the temperature up and down buttons to select the desired value. Press stop to advance to the next option.

Setting: SP rU
Description: rotational speed of machine for wash steps and reversing drain steps; control will automatically calculate proper voltage output; P6 washers only
Settings: may be set to any value between 0 and 999; entry may be in RPM or Hz as long as same units are used for all other RPM settings
To Edit: Use the temperature up and down buttons to select the desired value. Press stop to advance to the next option.

Setting: SP dr
Description: rotational speed of machine for one-way drain steps; control will automatically calculate proper voltage output; P6 washers only
Settings: may be set to any value between 0 and 999; entry may be in RPM or Hz as long as same units are used for all other RPM settings
To Edit: Use the temperature up and down buttons to select the desired value. Press stop to advance to the next option.

Setting: SP dS
Description: rotational speed of machine for distribution; control will automatically calculate proper voltage output; P6 washers only
Settings: may be set to any value between 0 and 999; entry may be in RPM or Hz as long as same units are used for all other RPM settings
To Edit: Use the temperature up and down buttons to select the desired value. Press stop to advance to the next option.

Setting: SP E1
Description: rotational speed of machine for the lowest extract speed; control will automatically calculate proper voltage output; P6 washers only
Settings: may be set to any value between 0 and 999; entry may be in RPM or Hz as long as same units are used for all other RPM settings
To Edit: Use the temperature up and down buttons to select the desired value. Press stop to advance to the next option.

Setting: SP E2
Description: rotational speed of machine for second extract speed; control will automatically calculate proper voltage output; P6 washers only
Settings: may be set to any value between 0 and 999; entry may be in RPM or Hz as long as same units are used for all other RPM settings
To Edit: Use the temperature up and down buttons to select the desired value. Press stop to advance to the next option.

Setting: SP E3
Description: rotational speed of machine for third extract speed; control will automatically calculate proper voltage output; P6 washers only
Settings: may be set to any value between 0 and 999; entry may be in RPM or Hz as long as same units are used for all other RPM settings
To Edit: Use the temperature up and down buttons to select the desired value. Press stop to advance to the next option.

Setting: SP E4
Description: rotational speed of machine for highest extract speed; control will automatically calculate proper voltage output; P6 washers only
Settings: may be set to any value between 0 and 999; entry may be in RPM or Hz as long as same units are used for all other RPM settings
To Edit: Use the temperature up and down buttons to select the desired value. Press stop to advance to the next option.

Setting: df CH
Description: the default chemical injection time; will be set to 60 by CCS
Settings: may be set to any value between 0 and 255; this is the time that is automatically entered for a chemical injection when the user presses the Inject button in the program mode.
To Edit: Use the temperature up and down buttons to select the desired value. Press stop to advance to the next option.

Setting: CH tP (1-10)
Description: injection type (before/after temperature or level) for each of the ten chemicals
Settings: may be set to the following values to configure the way the control injects that chemical.
        0:        Before temperature and level
        1:        After temperature
        2:        After level
        3:        After temperature and level (default)
To Edit: Use the temperature up and down buttons to select the desired value. Press stop to advance to the next option.

Setting: br ti
Description: machine stopping time
Settings: may be set to any value from 90 to 255 seconds. This is the time that the control will wait for the machine to stop at the end of an extract step.
To Edit: Press the temperature up and down buttons to select the desired value. Press stop to advance to the next option.

Setting: df dr
Description: the default time for a drain step
Settings: may be set to any value between 0 and 255; this is the time that is automatically programmed when the user sets up a drain step
To Edit: Press the time up and down buttons to select the desired value. Press stop to advance to the next option.

Setting: Fill ti
Description: the amount of time that the control will wait for water level to be achieved.
Settings: May be set to any value between 0 and 255. Setting the fill timeout to zero disables the error message.
To Edit: Press the temperature up and down buttons to select the desired value. Press stop to advance to the next option.

Setting: HEAt ti
Description: the amount of time that the control will wait for water temperature to be achieved.
Settings: May be set to any value between 0 and 255. Setting the heat timeout to zero disables the error message.
To Edit: Press the temperature up and down buttons to select the desired value. Press stop to advance to the next option.

Setting: SignAl
Description: the amount of time that the control will run the signal at the end of a formula.
Settings: May be set to any value between 0 and 255. Setting the signal time to 255 will cause the signal to run until cancelled by the operator.
To Edit: Press the temperature up and down buttons to select the desired value. Press stop to advance to the next option.

Setting: SEnd Pro/gEt Pro
Description: used to send wash programs between washers
Settings: see section on program downloading

Setting: tt
Description: the current hour meter value
Settings: no settings available
To Edit: Press the stop key to advance to the next option

Setting: St
Description: the current number of hours on the service meter
Settings: The service meter interval may be set to any value between 0 and 65535 hours.
To Edit: to edit the service meter interval, press the step up or down buttons. The display will change to SS, at which point the temperature up and down buttons will allow you to change the service timer interval. Press the stop key to advance to the next option.

Setting: PC
Description: the number of times the control has been powered on and shut down
Settings: no settings available
To Edit: Press the stop key to advance to the next option.

Setting: CLEAr Pro
Description: clear all wash programs
Settings: clears all current wash programs except the test program.
To Edit: Press the temperature up key. The control will display "r u sure" to confirm that you want to clear the wash programs. Press the temperature up key again to clear all programs; press any other key to advance to the next option.

Counter Mode

Entering counter mode

Put the keyswitch in the Program position. Push in the emergency stop button to shut off power to the washer. Turn the emergency stop button to restore power to the machine. While the "Edro" banner is displayed on the screen, press and release the stop key. The control will enter counter mode; the step display will show "tt" and the time display will display the total run time for the machine.

The counter mode may also be entered by going into the program mode, pressing the program up and down keys simultaneously to enter program edit mode, pressing the program up and down keys again to display the advanced editing options, then using the program up and down keys to select "counters". Press the start key to enter the counter mode.

Setting: tt
Description: the current hour meter value
Settings: no settings available
To Edit: Press the stop key to advance to the next option

Setting: St
Description: the current number of hours on the service meter
Settings: The service meter interval may be set to any value between 0 and 65535 hours.
To Edit: to edit the service meter interval, press the step up or down buttons. The display will change to SS, at which point the temperature up and down buttons will allow you to change the service timer interval. Press the stop key to advance to the next option.

Setting: PC
Description: the number of times the control has been powered on and shut down
Settings: no settings available
To Edit: Press the stop key to advance to the next option.

Wash Program Downloading

Before you start: Make sure that the download cable is connected to the desired source and destination washers.

> *Note: when downloading programs, anything programmed in the destination control will be lost.*

If you are in the Configuration Mode:
1. To set up a washer to receive wash programs:
    a. Use the stop key to select "Get Pro".
    b. Press the temperature up or temperature down key to enable receive mode. The control is now ready to accept wash programs.
2. To set up a washer to send wash programs:
    a. Use the stop key to select "Send Pro".
    b. Press the temperature up or temperature down key to enable send mode. When the destination control is ready, the wash program download will begin.

If you are in the Program Mode:
1. Press the program up and program down buttons simultaneously to enter the Program Edit Mode (the decimal points on the Program display will be illuminated).
2. Press the program up and program down buttons simultaneously again.
3. To set up a washer to receive wash programs:
    a. Use the program up and program down keys to select "Get Pro".
    b. Press the start key to enable receive mode. The control is now ready to accept wash programs.
4. To set up a washer to send wash programs:
    a. Use the program up and program down keys to select "Send Pro".
    b. Press the start key to enable send mode. When the destination control is ready, the wash program download will begin.

While downloading the temperature display on the sending unit will count up as the control sends each wash program. When the download is finished, the display on both the sending unit and the receiving unit will read "Finished".

To cancel the download, press the stop key on the sending unit.

FACTORY PROGRAMS

The following "ready-to-use" programs have been developed by leading chemical companies for commercial and on-premise laundry applications. Although the programs are stored in the permanent memory of the control, they can be edited and/or erased. To operate any of them, simply scroll to the appropriate number and press START. Use them as a guide to developing your own wash programs.

No. 43: Heavy Wash - White

Step	Function	Time	Water	Level	Supply No.
1	Fill/Wash/Suds	10	Hot	High	1 & 2
2	Drain	1			
3	Fill/Wash/Suds	5	Hot	Medium	3
4	Drain	1			
5	Fill/Wash/Rinse	2	Split	Medium	
6	Extract	1		Low	
7	Fill/Wash/Rinse	2	Split	Medium	
8	Drain	1			
9	Fill/Wash/Rinse	3	Hot	Low	4
10	Extract	8		High	
11	Fluff	1			
	TOTAL	35			

No. 44: Heavy Wash - Color

Step	Function	Time	Water	Level	Supply No.
1	Fill/Wash/Suds	10	Cold	High	1 & 2
2	Drain	1			
3	Wash/Suds	5	Cold	Medium	3
4	Drain	1			
5	Fill/Wash/Rinse	2	Cold	Medium	
6	Extract	1		Low	
7	Fill/Wash/Rinse	2	Cold	Medium	
8	Drain	1			
9	Fill/Wash/Rinse	3	Cold	Low	4
10	Extract	8		High	
11	Fluff	2			
	TOTAL	36			

No. 45: Recreational Goods

Step	Function	Time	Water	Level	Supply No.
1	Fill/Wash/Suds	7	Split	Medium	1
2	Drain	1			
3	Fill/Wash/Suds	3	Split	Medium	2
4	Drain	1			
5	Fill/Wash/Rinse	2	Split	Medium	
6	Drain	1			
7	Fill/Wash/Rinse	3	Split	Low	
8	Extract	5		High	
9	Fluff	1			
	TOTAL	24			

No. 46: Socks/T-Shirts

Step	Function	Time	Water	Level	Supply No.
1	Fill/Wash/Suds	8	Hot	High	1
2	Drain	1			
3	Fill/Wash/Suds	5	Hot	Medium	2
4	Drain	1			
5	Fill/Wash/Rinse	2	Split	Medium	
6	Drain	1			
7	Fill/Wash/Rinse	2	Split	Medium	
8	Drain	1			
9	Fill/Wash/Rinse	3	Hot	Low	3 & 4
10	Extract	7		High	
11	Fluff	2			
	TOTAL	33			

No. 47: Delicate Goods

Step	Function	Time	Water	Level	Supply No.
1	Fill/GentleWash/ Suds	7	Split	Medium	1
2	Drain	1			
3					
4	Fill/GentleWash/ Suds	3	Split	Medium	2
5	Drain	1			
6	Fill/GentleWash/ Suds	2	Split	Medium	
7	Drain	1			
8	Fill/GentleWash/ Suds	3	Hot	Medium	4
9	Extract	5		Low	
10	Fluff	2			
	TOTAL	25			

No. 48: Cold Wash

Step	Function	Time	Water	Level	Supply No.
1	Fill/Wash	3	Cold	High	
2	Drain	1			
3	Fill/Wash/Suds	5	Cold	Medium	1
4	Drain	1			
5	Fill/Wash/Rinse	2	Cold	Medium	
6	Drain	1			
7	Fill/Wash/Rinse	2	Cold	Medium	
8	Drain	1			
9	Fill/Wash/Rinse	2	Cold	Low	2
10	Extract	5		High	
11	Fluff	1			
	TOTAL	24			

No. 49: Towels & Uniforms

Step	Function	Time	Water	Level	Supply No.
1	Fill/Wash/Suds	8	Hot	High	1
2	Drain	1			
3	Fill/Wash/Suds	5	Split	Medium	2
4	Drain	1			
5	Fill/Wash/Rinse	2	Split	Medium	
6	Drain	1			
7	Fill/Wash/Rinse	2	Split	Medium	
8	Drain	1			
9	Fill/Wash/Rinse	3	Split	Low	3
10	Extract	8		High	
11	Fluff	1			
	TOTAL	33			

No. 50: Bedspreads & Blankets

Step	Function	Time	Water	Level	Supply No.
1	Fill/Wash/Suds	8	Hot	High	1
2	Drain	1			
3	Fill/Wash/Suds	5	Hot	Medium	2
4	Drain	1			
5	Fill/Wash/Rinse	2	Split	Medium	
6	Drain	1			
7	Fill/Wash/Rinse	2	Split	Medium	
8	Drain	1			
9	Fill/Wash/Rinse	3	Hot	Low	3 & 4
10	Extract	7		High	
11	Fluff	2			
	TOTAL	33			

No. 51: Test Program

Step	Function	Time	Water	Level	Comments
1	Fill/Wash	1	Cold	Low	add 1 - 3 internal chemical supplies
2	Fill/Wash	1	Cold	Low	add 4 - 5 internal chemical supplies
3	Drain	15 sec			Forward only
4	Fill/Wash	1	Hot	Medium Low	add 1 - 3 external chemical supplies
5	Fill/Wash	1	Hot	Medium Low	add 4 - 5 external chemical supplies
6	Drain	15 sec			Forward only
7	Fill/Wash	1	150 oF	Medium	Heat to temperature
8	Drain	15 sec			Forward only
9	Fill/Soak	1	Split	Medium High	
10	Soak	15 sec			
11	Drain	15 sec			Forward only / Error#19 Test
12	Fill/Wash	1	Split	High	
13	Extract	1		Low	
14	Extract	3		High	30 second low / Error #16 Test
15	Fluff	1			cycle end
	TOTAL	14			

Note: Step 11 tests for a stuck or clogged drain. Error #19 will appear after 15 seconds. To continue step, press the start button repeatedly until the control advances to step 12.

Note: Step 14 tests the vibration switch operation. To test, trip the vibration switch during extract acceleration. The control will signal error #16 and proceed through a balancing sequence. Some machine models may require the switch to be manually reset.

PROGRAM WORKSHEETS

Step	Function	Time	Water	Level	Supply No. & Name
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Step	Function	Time	Water	Level	Supply No. & Name
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

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